

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Lars BLANK et al.

Title: METHOD OF IMPROVING BIOMASS YIELD OF LACTIC ACID  
BACTERIAL CULTURES

Appl. No.: Unassigned

Filing Date: 07/22/2003

Examiner: Unknown

Art Unit: Unknown

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Mail Stop PATENT APPLICATION  
Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Applicants submit herewith on Form PTO/SB/08 a listing of the documents cited by or submitted to the U.S. PTO in parent application Serial No. 09/898,490, filed 07/05/2001. As provided in 37 CFR §1.98(d), copies of the documents are not being provided since they were previously submitted to the United States Patent & Trademark Office in the above-identified parent application.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), within three (3) months of the filing date of the application.

RELEVANCE OF EACH DOCUMENT

All of the documents are in English.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date

22 July 2003

By

Stephen A. Bent

FOLEY & LARDNER

Customer Number: 22428



22428

PATENT TRADEMARK OFFICE

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Substitute for form 1449B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> Date Submitted: July 22, 2003 (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	Unassigned
				Filing Date	07/22/2003
				First Named Inventor	Lars Blank
				Group Art Unit	Unknown
				Examiner Name	Unknown
				Attorney Docket Number	030307-0217
Sheet	1	of	3		

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	A1	3,655,396		GOTO et al.	04/11/1972	
	A2	4,115,199		PORUBCAN et al.	09/19/1978	
	A3	5,075,226		KANEKO et al.	12/24/1991	
	A4	5,798,237		PICATAGGIO et al.	08/25/1998	
	A5	6,284,518	B1	HENICK-KLING et al.	09/04/2001	

FOREIGN PATENT DOCUMENTS							
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		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
	A6	WO	00/05342	A	AGRONOMIQUE INST. NAT. RECH.	02/03/2000	
	A7	WO	98/10089	A	JENSEN et al.	03/12/1998	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
	A8	ANDERSEN ET AL., "Are Growth Rates of <i>Escherichia coli</i> in Batch Cultures Limited by Respiration", J. of Bacteriology, 1980, pp. 114-123, vol. 144, no. 1, Univ. of Microbiology, Copenhagen Denmark	
	A9	ANDERSEN et al., "The Importance of Balanced Expression of Glycolytic Genes in <i>Lactococcus Lactis</i> ", Meeting Report, 263-270	
	A10	ANDERSEN ET AL., "Twofold Reduction of Phosphofructokinase Activity in <i>Lactococcus lactis</i> Results in Strong Decreases in Growth Rate and in Glycolytic Flux", J. of Bacteriology, 2001, pp. 3458-3467, vol. 183, no. 11, American Society for Microbiology	
	A11	ANRAKU ET AL., "The Aerobic Respiratory Chain of <i>Escherichia coli</i> ", TIBS 12, 1987, pp. 262-266, Univ. of Tokyo Hongo, Tokyo Japan	
	A12	ATLAS, R.M., Principles of Microbiology, 1995, p. 147, Mosby-year Book, Inc., Missouri	
	A13	BROCK ET AL., Biology of Microorganisms, Ninth Edition, 2000, Prentice Hall, Upper Saddle River, US	
	A14	BRYAN-JONES ET AL., "Haematin-Dependent Oxidative Phosphorylation in <i>Streptococcus Faecalis</i> ", J. Gen. Microbiol., 1969, pp. 247-260, vol. 58, Printed in Great Britain	

Examiner Signature	Date Considered
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		Examiner Name	Unknown		
Sheet	2	of	3	Attorney Docket Number	030307-0217

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
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	A15	BTK 2000 Programme: Conference Programme of the 9 <sup>th</sup> International BIOThermoKinetics Meeting, Friday, 7 April 2000, 15:00; Heidi Winterberg Andersen: The importance of balanced expression of glycolytic Genes in <i>Lactococcus lactis</i> .	
	A16	CLARKE ET AL., "The Effect of Haematin and Catalase on <i>Streptococcus Faecalis</i> var. <i>Zymogenes</i> Growing on Glycerol", J. of General Microbiology, 1980, pp. 339-347, vol. 121, Printed in Great Britain	
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	A19	FAUST ET AL., "Phosphorylation Coupled to NADH Oxidation with Fumarate in <i>Streptococcus Faecalis</i> 10Cl <sup>1</sup> ", Archives of Biochemistry & Biophysics, 1970, pp. 392-398, vol. 137, Cornell Univ., Ithaca, New York	
	A20	FOSTER ET AL., "Stoichiometry of Subunits in the H <sup>+</sup> -ATPase Complex of <i>Escherichia coli</i> ", J. of Biological Chemistry, 1982, pp. 2009-2015, vol. 257, no. 4, Univ. of Wisconsin Medical School, Madison Wisconsin	
	A21	GALLIN ET AL., "Evidence for Oxidative Phosphorylation in <i>Streptococcus Faecalis</i> ", Biochemical & Biophysical Research Communication, 1964, pp. 630-635, vol. 17, no. 6, Cornell Univ., Ithaca, New York	
	A22	GAY, "Construction and Characterization of an <i>Escherichia Coli</i> Strain wotj a <i>uncI</i> Mutation", J. of Bacteriology, 1984, pp. 820-825, vol. 158, no. 3, American Society for Microbiology	
	A23	INGLEDEW ET AL., "The Respiratory Chains of <i>Escherichia Coli</i> ", Microbiological Reviews, 1984, pp. 222-271, vol. 48, American Society for Microbiology	
	A24	INGRAHAM ET AL., Growth of the Bacterial Cell, 1983, pp. 148-151, Saunderland, Massachusetts: Sinauer Associates, Inc.	
	A25	ISRAELSEN ET AL., "Cloning and Partial Characterization of Regulated Promoters from <i>Lactococcus Lactis</i> Tn917-lacZ Integrants with the New Promoter Probe Vector, pAK80", Applied Environmental Microbiology, 1995, pp. 2540-2547, vol. 61, no. 7, American Society for Microbiology	
	A26	JENSEN ET AL., "Excess Capacity of H <sup>+</sup> -ATPase and Inverse Respiratory Control in <i>Escherichia coli</i> ", EMBO Journal, 1993, pp. 1277-1282, vol. 12, no. 4, Oxford University Press	
	A27	JENSEN ET AL., "Minimal Requirements for Exponential Growth of <i>Lactococcus Lactis</i> ", Applied Environmental Microbiology, 1993, pp. 4363-4366, vol. 59, no. 12, American Society for Microbiology	
	A28	JENSEN ET AL., "The Sequence of Spacers Between the Consensus Sequences Modulates the Strength of Prokaryotic Promoters", Applied Environmental Microbiology, 1998, pp. 82-87, vol. 64, no. 1, American Society for Microbiology	
	A29	KASHKET, "The Proton Motive Force in Bacteria: A Critical Assessment of Methods", Ann. Rev. Micro., 1985, pp. 219-242, vol. 39, Annual Reviews Inc,	

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	A30	KOEBMANN ET AL., "The Membrane-Bound H <sup>+</sup> -ATPase Complex is Essential for Growth of <i>Lactococcus Lactis</i> ", J. of Bacteriology, 2000, pp. 4738-4743, vol. 182, no. 17, American Society for Microbiology	
	A31	MALONEY, "Coupling to an Energized Membrane: Role of Ion-Motive Gradients in the Transduction of Metabolic Energy", Escherichia Coli and Salmonella Typhimurium, F.C. Neidhardt, ed. 1987, pp. 232-243, American Society of Microbiology	
	A32	POOLE ET AL., "Pathways of Electrons to Oxygen", Escherichia Coli and Salmonella Typhimurium, F.C. Neidhardt, ed. 1987, pp. 170-200, American Society of Microbiology,	
	A33	PRITCHARD ET AL., "Cytochrome Formation, Oxygen-Induced Proton Extrusion and Respiratory Activity in <i>Streptococcus Faecalis</i> var. <i>Zymogenes</i> Grown in the Presence of Haematin", J. General Microbiology, 1978, pp. 15-22, vol. 104, Printed in Great Britain	
	A34	PUGH ET AL., "Growth of <i>Streptococcus Faecalis</i> var. <i>Zymogenes</i> on Glycerol: The Effect of Aerobic and Anaerobic Growth in the Presence and Absence of Haematin on Enzyme Synthesis", J. General Microbiology, 1982, pp. 1009-1017, Printed in Great Britain	
	A35	RITCHEY ET AL., "Cytochromes in <i>Streptococcus Faecalis</i> var. <i>Zymogenes</i> Grown in a Haematin-Containing Medium", J. General Microbiology, 1974, pp. 220-228, vol. 85, Printed in Great Britain	
	A36	RITCHEY ET AL., "Distribution of Cytochrome-like Respiration in Streptococci", J. General Microbiology, 1976, pp. 195-203, vol. 93, no. 1, Printed in Great Britain	
	A37	SMALLEY ET AL., "Molar Growth Yields as Evidence for Oxidative Phosphorylation in <i>Streptococcus Faecalis</i> Strain 10C1 <sup>1</sup> ", J. Bacteriology, 1968, pp. 1595-1600, vol. 96, no. 5, American Society for Microbiology	
	A38	SNEATH ET AL., "Streptococcus", Bergey's Manual of Systematic Bacteriology, 1986, pp. 1043-1071, vol. 2, Williams & Wilkins	
	A39	UNDEN ET AL., "Alternative Respiratory Pathways of <i>Escherichia Coli</i> : Energetics and Transcription Regulation in Response to Electron Acceptors", Biochimica Et Biophysica Acta 1320, 1997, pp. 217-234, Elsevier Science B.V.	
	A40	WACHENFELDT ET AL., "Molecular Biology of Bacillus Subtilis Cytochromes", FEMS Microbiology Letters 100, 1992, pp. 91-100, Federation of European Microbiological Societies	
	A41	WEB-site Aplin & Barrett ( <a href="http://www.aplin-barrett.co.uk/nisaplin_technical.htm">www.aplin-barrett.co.uk/nisaplin_technical.htm</a> ); cited as technical Information.	
	A42	WHITTENBURY, "Hydrogen Peroxide Formation and Catalase Activity in the Lactic Acid Bacteria", J. Gen. Microbiol., 1964, pp. 18-26, vol. 35, Printed in Great Britain	

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